

Scanned by Date Doc ID# DCH 5/15/08 4576

February 25, 2008

Mr. Donald Herndon **Environmental Specialist** NCDENR Division of Waste Management -Solid Waste Section 401 Oberlin Road, Suite 150 Raleigh, North Carolina 27605

RE:

Well Abandonment Report - MW-2 and MW-9

Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28

Holly Springs, Wake County, North Carolina

Dear Mr. Herndon:

Richardson, Smith, Gardner, and Associates Inc. is submitting this letter on behalf of Red Rock Disposal, LLC (Red Rock), a subsidiary of Waste Industries USA, Inc. (Waste Industries), to document the well abandonment conducted on February 15th, 2008.

Two monitoring wells, MW-2 and MW-9, required abandonment. Their locations are shown on Figure 1. Well MW-2, located south of the landfill, was a permitting piezometer that was not part of the monitoring well network. This well had been driven over by a piece of heavy equipment. Well MW-9 was located in the Phase 1C-2 construction area. Construction of Phase 1C-2 began approximately three (3) days after the well abandonment.

Observations of well MW-2 showed the metal casing was flattened and the concrete pad was broken. Well MW-9 was found to be in good condition. A back hoe was used to remove the steel well casings and concrete pads at each location. Upon removal of the well casing of MW-2 measurements of the depth to water and depth to well bottom were taken. These measurements were also taken at MW-9 prior to abandonment. These measurements are included in Table 1.

Well sites MW-2 and MW-9 were abandoned in accordance with the State procedures for permanent abandonment of wells. Grout was tremie-piped to fill both wells from bottom to top after the metal casing and concrete pad were removed. David Barron, a licensed driller with Engineering Tectonics, P.A. performed the abandonment services under the supervision of Joan Smyth, P.G. of RSG. The well abandonment record and original boring logs are included in Attachment 1.

Mr. Herndon 2/25/08 Page 2 of 2

If you have any questions or require any additional information, please contact me at your earliest convenience (919) 828-0577 ext. 122 or by email at joan@rsgengineers.com.

Sincerely,

Richardson Smith Gardner & Associates Inc.

Joan A. Smyth, P.G. Senior Hydrogeologist

Attachments

cc: Don Plessinger – Red Rock Disposal David Pepper – Waste Industries Shawn Carrol – Waste Industries Figure 1

Table 1



Richardson Smith Gardner & Associates

Engineering & Geological Services

Table 1
Well Abandonment Data
Red Rock C&D Landfill
Holly Springs, North Carolina

| e de datus que Vacal de de de | | |
|---|-------|-------|
| MW-2 | 3.47 | 20.02 |
| MW-9 | 10.65 | 32 |

Measurements (in feet) collected at time of abandonment on 2/15/08 Measurements for MW-2 collected after removal of steel casing and concrete pad and are approximately from ground surface. Attachment 1



WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2089

| 1. WELL CONTRACTOR: DAVID BARRON Well Contractor (Individual) Name ENG. Tectonics | 5. WELL DETAILS: a. Total Depth: 20 ft. Diameter: 2 in. b. Water Level (Below Measuring Point): 3.47 ft. Measuring point is 6.5 ft. above land surface. |
|--|--|
| Well Contractor Company Name STREET ADDRESS 1720 UARGRAVE ST. W-SALEM N.C. 27107 City or Town State Zip Code | 6. CASING: Length Diameter a. Casing Depth (if known): b. Casing Removed: ft. 2" in. in. |
| 336 - 724-6994 Area code - Phone number | 7. DISINFECTION: A. (Amount of 65%-75% calcium hypochlorite used) |
| 2. WELL INFORMATION: SITE WELL ID # (if applicable) | 8. SEALING MATERIAL: Neat Cement Sand Cement |
| STATE WELL PERMIT # (if applicable) | lb. |
| COUNTY WELL PERMIT # (if applicable) | Watergal. Watergal. |
| DWQ or OTHER PERMIT # (if applicable) | <u>Bentonite</u> |
| WELL USE (Circle applicable use): Monitoring Residential Municipal/Public Industrial/Commercial Agricultural Recovery Injection Irrigation Other (list use) | Bentonitelb. Type: Slurry Pellets Water gal. |
| 3. WELL LOCATION: COUNTY WAKE QUADRANGLE NAME NEAREST TOWN: Holly Springs 7130 New LANdfill Or. 27540 | Type material EASY GROUT Amount 40165 27 gals water |
| (Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code) TOPOGRAPHIC / LAND SETTING: Slope Valley Flat Ridge Other (Circle appropriate setting) | 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL: TREMIE GROUT Well FROM BOTTOM TO TOP, Remove METAL CASING & TOP 3' of 2' PUC |
| LATITUDE May be in degrees, minutes, seconds, or in a decimal format LONGITUDE Topographic map (Location of well must be shown on a USGS topo map and attached to this form if not using GPS.) | 10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used. |
| 4a. FACILITY- The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.) | 11. DATE WELL ABANDONED 2-15-08 |
| FACILITY ID #(if applicable) | I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE |
| NAME OF FACILITY | WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER. |
| STREET ADDRESS | David Barron 2-15-08 |
| City or Town State Zip Code | SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE |
| 4b. CONTACT PERSON/WELL OWNER: NAME DON PLESSINGER STREET ADDRESS 7130 New Landfill Dr. Holy Springs N.C. 27540 City of Town State Zip Code (919)-557-9583 | SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.) Comparison |
| Area code - Phone number | 11 |



Murrysville, PA

MONITORING WELL LOG

WELL NO.

MW-2

TOTAL DEPTH

25'

PROJECT INFORMATION

PROJECT SITE LOCATION ADDRESS. **ELEVATION** LOGGED BY

DRILLING DATES DRILLER & CO. RIG TYPE DRILLING METHOD SAMPLING METHOD Split-spoon NOTES:

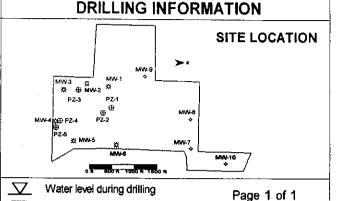
Red Rock Landfill

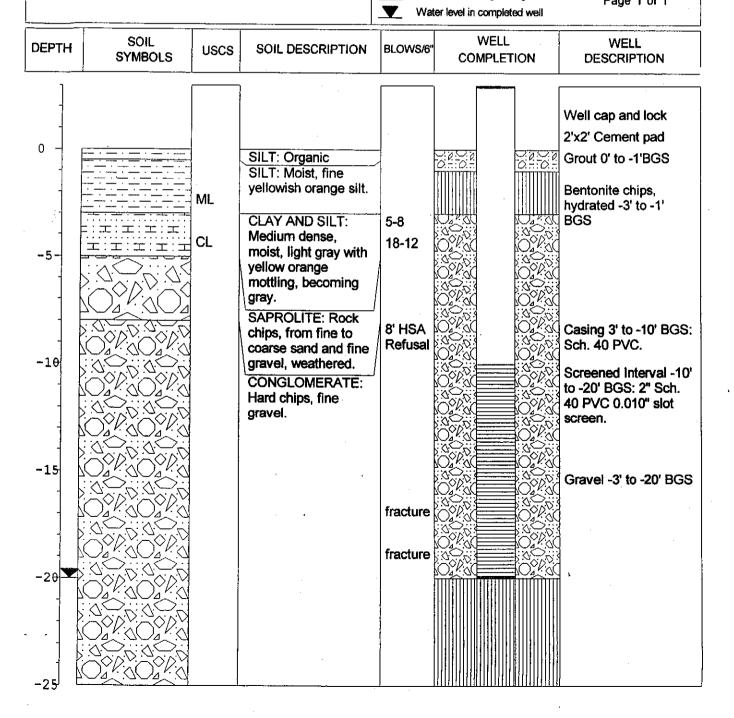
Holly Springs, North Carolina Rex Road (State Route 1127) GS 260.46 PVC 262.13 ft amsl.

Peter Weir October 3, 2000 Richard Simmons Drig.

Canterra 250 HSA 4.25, Air Rotary

Drilled dry; WL 10/13/00 20' bas







WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION #

2089

| WEED CONTINUE ON CONTINUE | |
|---|--|
| WELL CONTRACTOR: O AUG BARRON Well Contractor (Individual) Name ENG. Tectonics Well Contractor Company Name | 5. WELL DETAILS: a. Total Depth: 32.0 ft. Diameter: 2 in. b. Water Level (Below Measuring Point): 10.65 ft. Measuring point is 3 ft. above land surface. |
| STREET ADDRESS 1720 UARGRAVE ST. WSAlem N.C. 27107 City or Town State Zip Code 336) - 724 - 6994 Area code - Phone number | 6. CASING: a. Casing Depth (if known): b. Casing Removed: 7. DISINFECTION: Length Pi. Diameter ft. Diameter in. 7. DISINFECTION: |
| 2. WELL INFORMATION: SITE WELL ID # (if applicable) | (Amount of 65%-75% calcium hypochlorite used) 8. SEALING MATERIAL: |
| STATE WELL PERMIT # (if applicable) | Neat Cement Sand Cement |
| COUNTY WELL PERMIT # (if applicable) | Cementlb. Cementlb. Water gal. Water gal. |
| DWQ or OTHER PERMIT # (if applicable) | <u>Bentonite</u> |
| WELL USE (Circle applicable use): Monitoring Residential Municipal/Public Industrial/Commercial Agricultural Recovery Injection Irrigation Other (list use) | Bentonitelb. Type: SlurryPellets Water gal. |
| 3. WELL LOCATION: COUNTY WAKE QUADRANGLE NAME NEAREST TOWN: Holly Springs 7130 New LANDFILL DR. 27540 | Other Type material EASY GROUT Amount 401bs 27 gals water |
| (Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code) TOPOGRAPHIC / LAND SETTING: (Slope) Valley Flat Ridge Other (Circle appropriate setting) | 9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL: TRAMIC GROUT WE'LL FROM Bottom to top, Remove Metal Casing top 3 of 2" PUC |
| LATITUDE LONGITUDE Latitude/longitude source: GPS Topographic map (Location of well must be shown on a USGS topo map and attached to this form if not using GPS.) | 10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used. |
| 4a. FACILITY. The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only.) | 11. DATE WELL ABANDONED 2-15-08 |
| FACILITY ID #(if applicable) | I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF |
| NAME OF FACILITYSTREET ADDRESS | THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER. 2-15-08 |
| City or Town State Zip Code | SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE |
| 4b. CONTACT PERSON/WELL OWNER: |] |
| NAME DON Plessinger STREET ADDRESS 7130 New LANDEIL DR. Holy Springs N.C. 27540 | SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE (The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.) PRINTED NAME OF PERSON ABANDONING THE WELL |
| City or Town State Zip Code (919) - 557 - 9583 Area code - Phone number | FRINTED NAME OF LEASON ABANDONING THE |



the HUTCHINSON GROUP, Ltd. **Consulting Earth Scientists**

Murrysville, PA

PIEZOMETER LOG

WELL NO.

MW-9

TOTAL DEPTH

37'

PROJECT INFORMATION

PROJECT SITE LOCATION **ADDRESS ELEVATION LOGGED BY** DRILLING DATES

DRILLER & CO. **RIG TYPE**

DRILLING METHOD SAMPLING METHOD Split-spoon NOTES:

Red Rock Landfill

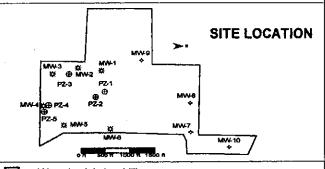
Holly Springs, North Carolina Rex Road (State Route 1127) GS 298.44 ft, PVC 300.69 ft amsl Peter Weir

October 16, 2000

R. Simmons Drlg. T. Tryhuba

Canterra 250 HSA Air Rotary 6.875"

Drilled dry; WL 10/17/00 7.00' bgs



DRILLING INFORMATION

Water level during drilling Water level in completed well

Page 1 of 1

| Water level in completed well | | | | | | |
|-------------------------------|-----------------|------|---|---|--------------------|---|
| DEPTH | SOIL SYMBOLS | USCS | SOIL DESCRIPTION | BLOWS/6" | WELL COMPLETION | WELL DESCRIPTION |
| -10 | | | CLAY AND SILT: Light gray with yellow orange mottles, moist. CLAY AND SILT: Light brown, 25% fine to medium sand. CLAY: Gleyed gray with light brown mottles, moist. CLAY AND SILT: Light brown, CLAY: Gleyed gray, root traces, moist. SAPROLITE: Red brown, soft, fine grained. CONGLOMERATE: | 3-4 4-7 8-14 23-17 8-16 36-42 8-17 34-15 50/2" 13.4' HSA Refusal fracture | | Well Cap and Lock Surface 2'x2' cement pad. Grout -0' to -1' BGS Bentonite chips hydrated -1' to -4' BGS Casing 3' to -22' BGS: 2" Sch. 40 PVC |
| -2 0 | | | Red brown, very hard, fine grained. | fracture | | |
| -25 | | | | | | Screened Interval -22' to -32' BGS: 2' Sch. |
| -30 | | | | | | 40 PVC, 0.010"-slot screen. Gravel -4' to -32' BGS |
| -35 -35 | | | | | | Hole caved in to 32' |